



LEADING IN CROP INNOVATION

Bruce Napier

Provisional Results



AHDB Horticulture Strategic Centres for Field Vegetables

FV462 - Onion Bean Seed Fly Trial 2021



FV462 Onion Trials

- Thanks to the following:
- Trial Funded by AHDB Horticulture and Seed Companies
- Trial Hosted by:
 - 3Ms growers (Suffolk) arranged by J Klug
- Supported by a BOPA Steering Group
 - Steering Group directs the format/content of the trials
 - Strategic Centres funding for BSF trial



Horticulture Strategic Centres for Field Vegetables

- Additional funding from AHDB was released to allow crop associations and growers to propose new areas of research and knowledge transfer without having to bid for a larger research grant.
- The onion BSF trial is such a piece of work within the AHDB Horticulture Strategic Centres for Field Vegetables.



BSF trial 2021 - background

- BSF a major pest of onion seedlings
- Approx. 65% UK drilled onion seed is (Force) tefluthrin treated against BSF attack
- Severe attacks can reduce plant stands by >40%.
- All EAMU's for Force expire on 31/12/21

- Re-registration of Force likely to result in 13g of a.s./ha being permitted from 2022
 - i.e. rate currently approved for sugar beet
 - currently onions are treated at 29g a.s./ha

- This study was an initial look to discover if reduced rate of Force gives effective control



BSF trial 2021

- 1 BSF trial hosted, with thanks to:
 - James @ Deben Agronomy, Suffolk – arranged high infestation risk site with 3Ms
 - Ed @ Rix, Essex - trapping
 - Phill @ Elsoms seeds – seed treatment

Treatment	Product	rate a.s. g/ha	seed type
1	untreated	0	natural
2	Force	13	natural
3	Force	29	natural
4	untreated	0	pellets
5	Force	13	pellets
6	Force	29	pellets

- 6 seed treatments
- Drilled 26th March 2021
- Added bone meal to soil surface
- Population counts every 7-10 days from emergency to early June
- BSF traps sent for identification and reporting through Pest Bulletin



BSF trial results 2021

- Establishment slow and uneven
- Pelleted seed tends to emerge later than naked/coated seed
- Low infestation in April so trial missed peak risk period
- Some improvement in plant densities with greater application rates of Force
- Full rate > Half rate > untreated
- Higher infestation would probably stretch the differences
- Some Force is better than none but if approved risks BSF developing resistance

			visit 1	visit 2	visit 3	visit 4	visit 5	visit 6
Product	rate g/ha	seed type	density /m2	density /m2	density /m2	density /m2	density /m2	density /m2
untreated	0	natural	52.5	56.2	56.0	55.1	55.3	54.8
Force	13	natural	53.6	57.8	56.7	57.2	57.2	57.4
Force	29	natural	58.5	63.1	62.7	61.9	62.5	62.5
untreated	0	pellets	47.2	57.6	55.7	56.7	56.5	56.2
Force	13	pellets	46.0	58.4	58.8	59.6	59.5	59.8
Force	29	pellets	56.0	61.4	58.8	59.7	60.5	60.1

plant densities at early growth stages

			visit 1	visit 2	visit 3	visit 4	visit 5	visit 6
Product	rate g/ha	seed type	Density %	Density %	Density %	Density %	Density %	Density %
untreated	0	natural	90	89	89	89	88	88
Force	13	natural	92	92	90	92	91	92
Force	29	natural	100	100	100	100	100	100
untreated	0	pellets	84	94	95	95	93	93
Force	13	pellets	82	95	100	100	98	100
Force	29	pellets	100	100	100	100	100	100

plant densities at early growth stages expressed as a percentage of the (equivalent) full rate Force treatment



- Thank you

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